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Signature analysis of circuits with detection of single faults

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Abstract

A test system is considered in which the signature analyzer, i.e. the most frequently applied system of built-in testing, is used for compression of the output sequence of a tested device. A system of built-in testing of combinational circuits is suggested that uses a linear sequential machine for compression of the input and output sequence and allows to detect single faults of a circuit implemented in the form of a programmed logic matrix on the basis of perfect disjunctive normal form of the output functions.